

**A NEW NEOTROPICAL SYRPHID FLY, MESOGRAPTA
APEGIENSIS (DIPTERA: SYRPHIDAE)**

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ABSTRACT—*Mesograpta apegensis*, n. sp. is described from Brazil and reference to a key is given for its identification.

Mesograpta apegensis n. sp. was captured by Y. S. Sedman in the Área De Pesquisas Ecológicas Do Guamá (The Ecological Research Area or APEG) of Belém, Pará, Brazil and is an apparent tropical rain forest dweller. It is related to *Mesograpta croesus* (Hull), with only slight differences in the abdominal pattern and coloration of the scutum and head. Sao Paulo is the type locality of *M. croesus* and other specimens collected at and near this city have been identified as *M. croesus* by J. R. Vockeroth of the Entomology Research Institute, Canada Department of Agriculture.

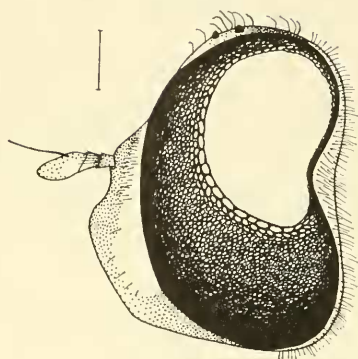
Mesograpta apegensis Harbach, new species

Length about 8.0 mm.

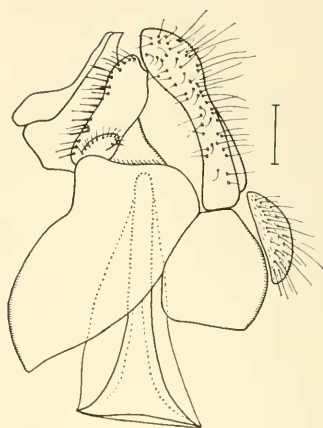
Male. Head (fig. 1): Face shining brownish black, pale yellow at sides with whitish pubescence; front shining brownish black, pale yellow at sides and above; cheeks shining brownish black; occiput appearing pollinose, white or greyish pubescent below, pale yellow pubescent at sides, golden yellow pubescent above and behind vertex; posterior half of vertex, behind ocelli, shining deep bluish purple and anterior fourth, in front of ocelli, grey pubescent; antennae brownish yellow, first 2 segments browner.

Thorax: Scutum shining with median metallic blue vitta margined on each side by 6 others: a dark brown to black stripe outside of which lies a golden coppery stripe, next 2 respectively the same followed by a metallic bluish-black stripe, and margin pale yellow and confluent with humeri and margin of scutellum of same color; disc of scutellum dark brown; pleura shining metallic black, yellow stripes on posterior half of mesopleura, yellow spot on upper portion of sternopleura. Legs pale yellow; posterior femora with brownish-black subapical bands; posterior tibia with similar but broader bands subbasal; tarsi golden to brownish yellow. Wings (fig. 3) brownish, stigma darker brown; microtrichia absent from proximal portion of marginal cell, narrow area along proximal portion of posterior vein of submarginal cell, all but scattered areas along spurious vein and distal end of first basal cell, second basal cell but wedge of microtrichia extending from distal end, narrow areas along anterior veins at proximal ends of first, second, and third posterior cells, anterior half of anal cell, and minute spot at proximal end of axillary cell.

Abdomen (fig. 2): More or less parallel sided, dark brown to black markings on yellow to reddish-yellow background; first segment largely yellow, narrowly



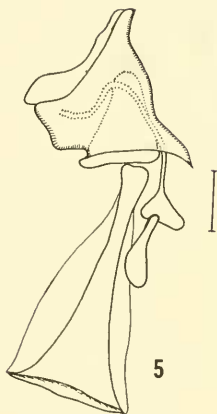
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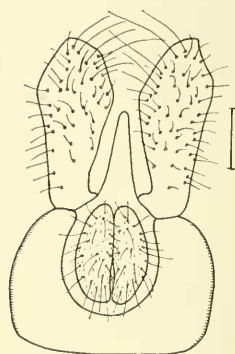
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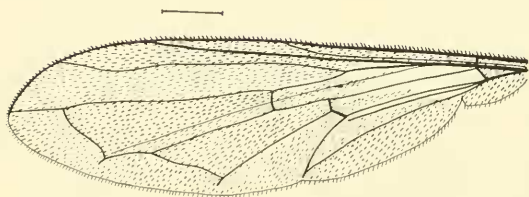
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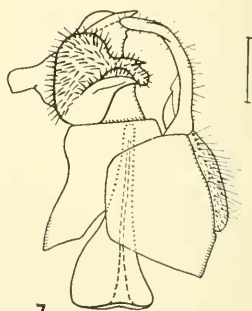
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black distally; second segment consisting of 5 fasciae of nearly equal width, anterior fascia brownish yellow, posterior fascia brownish red, center fascia yellow and margined on either side by dark brown or black fasciae that produce a very thin linear vitta that divides center band; third segment with posterior brownish-red fascia which does not quite reach lateral margins of the segment and an anterior yellow or reddish-yellow fascia which divides the central dark brown or black of the segment by producing a narrow median vitta, 2 submedial lunulate spots, and triangular areas in the corners of the segment; segment 4 same as 3 except dark brown or black of segment may reach base of segment 3; fifth segment with medial dark brown or black diamond-shaped spot with crescentic spots of same color on either side; hypopygium with dark brown spot on right side.

Male genitalia (fig. 4-6): Superior lobes somewhat rectangular with small lobes projecting at disto-dorsal edge, rounded lamellae projecting from base with hairs, vestiture of erect bristles along ventral margin; cerci covered with dense short pile and scattered long hairs; styli compressed more dorsoventrally than laterally, somewhat quadrangular in dorsal view, covered with scattered hairs with long hairs concentrated on disto-medial margin of dorsal side; triangular process slender and narrowly rounded at tip, half as long as styli; ejaculatory hood prolonged, narrowed, and almost pointed distad; sustentacular apodeme abruptly enlarged basad, dorsal keel nearly straight from apex to base, ventral keel somewhat rounded; ejaculatory apodeme laminate, flattened laterally, apex slightly flared; ejaculatory sac bilobed, lobes projecting latero-dorsad and flattened, upper surfaces with a depression; penis sheath twice as large as epandrium in lateral view; cercal emargination roughly V-shaped in ventral view with one-half diameter of entire penis sheath, dorsal tip of V narrowly rounded.

Female. Thorax and abdomen as in male; head with black of vertex confluent with black of front and sides of front yellow.

Holotype: Male. Brazil: Belém, Pará, APEG. April 26, 1967, Y.S. Sedman col. Allotype, same data. Paratypes, same locality and collector: 1 male, April 1, 1967; 1 female, April 26, 1967; 1 female, April 28, 1967; 1 female, May 2, 1967; 1 male, May 5, 1967; 1 male, May 26, 1967; 1 male, May 29, 1967; 1 male, May 30, 1967. Holotype, allotype, and four paratypes deposited in the Canadian National Collection of Insects (CNC) and four paratypes retained at the Department of Biological Sciences of Western Illinois University.

Mesograpta apegensis n. sp. should key out as *M. croesus* using Hull's (1943) key. These two species can be separately distinguished, however, with the following addition to couplet 30:

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Fig. 1-6, *Mesograpta apegensis*. 1, head (left side) 2, abdomen of male (dorsal) 3, left wing (male) 4, male genitalia (right side) 5, axial system of male genitalia 6, male genitalia (dorsal aspect). Fig. 7, *Mesograpta croesus* (Hull), male genitalia (right side). Scale equals 0.16 mm (fig. 4-7), 0.32 mm (fig. 1), 0.64 mm (fig. 2, 3).

- "The fascia of both segments are widely obsolescent on the margin in the middle, the medial ends . . ." (Hull, 1943) 30a
- 30a Front and face pale yellow; styli of male genitalia strongly curved ventrally in lateral view, outer surface of superior lobes and upper surface of their lamellae covered with short bristles (fig. 7)
 *M. croesus* (Hull)
- 30a' Front and face with dark brown to black stripe; styli not ventrally curved, superior lobes with longer bristles along ventral margin
 *M. apugiensis* Harbach

REFERENCE

- Hull, F. M. 1943. The Genus *Mesogramma*. Entomol. Am. 23:1-41.

**ADELA RIDINGSSELLA CLEMENS IN THE GREAT SMOKY MOUNTAINS,
 TENNESSEE, AT LIGHT (LEPIDOPTERA: INCURVARIIDAE)**

Adela ridingsella Clemens is generally distributed in the deciduous forests of the eastern United States and Canada, extending south to the southern Appalachians of North Carolina and Tennessee. While this adelid seems not to have been previously reported from Tennessee, it would be expected to occur there since the Great Smoky Mountains encompass part of that state as well as North Carolina. At Cosby Campground, Cocke County, on the Tennessee side of Great Smoky Mountains National Park, 1 male and 1 female were simultaneously found next to a tabletop Coleman lantern at about 2200 hours on the windy and cool (ca. 7° C) evening (overcast with rain the next morning) of May 7, 1973. The May date is 1 month earlier than any previously reported date for capture of *A. ridingsella* (Powell, 1969, J. Lepid. Soc. 23:218-219) and the species has not been reported to be attracted to lights before. Adelids are otherwise strictly diurnal.

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